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INTERNATIONAL BULLETIN OF BACTERIOLOGICAL NOMENCLATURE AND TAXONOMY

Volume 8 October 15, 1958 No. 3-4

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OFFICIAL ORGAN OF THE JUDICIAL COMMISSION AND OF THE INTERNATIONAL COMMITTEE ON BACTERIOLOGICAL NOMENCLATURE

PUBLISHED QUARTERLY

FOR THE INTERNATIONAL ASSOCIATION OF MICROBIOLOGICAL SOCIETIES
WITH THE COOPERATION OF UNESCO AND IUBS

IOWA STATE COLLEGE PRESS
PRESS BUILDING, IOWA STATE COLLEGE
AMES, IOWA U.S.A.

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INTERNATIONAL BULLETIN
OF
BACTERIOLOGICAL NOMENCLATURE
AND
TAXONOMY

Volume 8 October 15, 1958 Nos. 3-4

MINUTES OF THE MEETINGS OF THE JUDICIAL COMMISSION OF THE INTERNATIONAL COMMITTEE ON BACTERIOLOGICAL NOMENCLATURE HELD AT STOCKHOLM IN CONNECTION WITH THE VII INTERNATIONAL CONGRESS FOR MICROBIOLOGY AUGUST 4-9, 1958

The first meeting of the Judicial Commission of the International Committee on Bacteriological Nomenclature was held on July 31, 1958, at the Karolinska Institute, Stockholm, Sweden. Those present were R.E. Buchanan (Chairman), C.H. Andrewes, A.A. Miles, E.G.D. Murray, J. Ramsbottom, P.Schaeffer, A. Sordelli, and W.A. Clark and S.T. Cowan, Secretaries.

Minute 1. The agenda prepared by the Secretary were approved.

Minute 2. Apologies for absence were received from A.Lwoff and C.B. van Niel and their alternates, P. Schaeffer and M. P. Starr, respectively, accepted.

Minute 3. Minutes of the last meeting, published in the International Bulletin of Bacteriological Nomenclature and Taxonomy, 1953, 3:141-154, were taken as read. No corrections were received, and the minutes were approved.

Minute 4. Matters arising from the minutes. The annotated Bacteriological Code, authorized at the Rome Congress, was published in June 1958. A minor omission from Table IV, viz. reference to Opinion 4 (revised), the rejection of the generic name Bacterium, was noted, and it was agreed that, if practicable, correction slips should be inserted in unsold copies, and that known purchasers would be notified.

It was agreed that discussion relative to any proposed emendations to the revised International Code of Nomenclature of the Bacteria and Viruses (1958) be deferred until after the close of the VII International Microbiological Congress (1958) and considered in preparation for and at the VIII Congress. The Judicial Commission under the Provisions of the Code will act on nomenclatural problems that arise through OPINIONS issued, shall consider all proposals for emendation

of the Code and prepare recommendations for consideration by the International Committee at its meeting in connection with the VIII Congress.

Minute 5. Joint Permanent Secretary representing nonmedical bacteriology. Prof. T. Wikén resigned in April 1957 as Joint Secretary, and W.A. Clark, approved by postal ballot of Commissioners, had acted in his place since October 1957. Dr. Clark's appointment as Joint Permanent Secretary representing nonmedical bacteriology was recommended to the International Committee on Bacteriological Nomenclature.

Minute 6. Relation of Nomenclature Committee and Commission to the International Union of Biological Sciences (IUBS).

(a) In the past the Nomenclature Committee received grants-in-aid directly from IUBS. These grants will in future be sought by application through the Executive Committee of the International Association of Microbiological Societies (IAMS).

(b) International Union of Biological Sciences at the meeting in July 1958 authorized an ad hoc committee to compare and try to correlate certain differences in terminology between the nomenclatural codes in bacteriology, botany, and zoology, each discipline to appoint two members to the IUBS Committee. It was agreed to recommend to the Executive Committee of IAMS the appointment of R.E. Buchanan and J. Ramsbottom to the ad hoc committee authorized by the International Union of Biological Sciences.

(c) The allocation of UNESCO funds received from IUBS for the support of culture collections was discussed, and recommendations were made to the IAMS Executive Committee to be forwarded by the Nomenclature Committee. These included the authorization of a subcommittee of the Judicial Commission to advise on the allocation of funds.

(d) The Judicial Commission formulated and adopted a resolution on "Allocation of Subventions to Culture Collections of Microorganisms" which was recommended to the International Committee for transmission to the Executive Committee for transmission to the Executive Committee. The text of this resolution is given on page 185 of this BULLETIN.

Minute 7. Relation of the Nomenclature Committee to the Executive Committee of IAMS. The Nomenclature Committee was founded in 1930 and is the only body within IAMS which has Permanent Secretaries to ensure continuity. It was agreed that a representative of the Nomenclature Committee could serve a useful purpose on the Executive Committee of the IAMS. It was agreed to recommend to the International Committee on Bacteriological Nomenclature that this Committee propose to the Executive Committee of the International Association of Microbiological Societies that a representative of the International Committee on Bacteriological Nomenclature be added to its membership. In the event that the International Committee accepts this recommendation, it is further suggested that E.G.D. Murray be nominated to this post.

The Judicial Commission agreed to recommend to the International Committee on Bacteriological Nomenclature that this Committee propose to the Executive Committee of the International Association of Microbiological Societies that the Executive Committee authorize the Judicial Commission to appoint a Subcommittee to advise the Executive Committee on the allocation of funds provided by the International Union of Biological Sciences to Culture Collections.

Minute 8. Report of the Editorial Board. The Report of the Editorial Board was submitted and approved. A change in the format and printing of the BULLETIN was discussed and the Editorial Board was authorized to find out approximate costs and facilities and to report to the Commission.

Minute 9. Official Opinions had been requested on various subjects and were considered.

Opinion 16. Conservation of the generic name Chromobacterium Bergonzini 1881 and designation of the type species and of a neotype culture.

1. The generic name Chromobacterium* Bergonzini 1879 is rejected and placed in the list of nomina generum rejicienda.

*Originally named Cromobacterium, later emended to conform to recommendations in the Code, Appendix A.

2. The generic name Chromobacterium Bergonzini 1881 is conserved and placed in the list of nomina generum conservanda.

3. The type species of the genus Chromobacterium Bergonzini 1881 is Chromobacterium violaceum Bergonzini 1881.

4. A neotype strain of Chromobacterium violaceum Bergonzini 1881 is designated and has been deposited in the American Type Culture Collection, Washington, D.C. (12472) and in the National Collection of Type Cultures, London (9757).

Opinion 17. Conservation of the generic name Staphylococcus Rosenbach, designation of Staphylococcus aureus Rosenbach as the nomenclatural type of the genus Staphylococcus Rosenbach, and the designation of a neotype culture of Staphylococcus aureus Rosenbach.

1. The generic name Staphylococcus Rosenbach 1884 is conserved and placed in the list of nomina generum conservanda.

2. Staphylococcus aureus Rosenbach 1884 is recognized as the nomenclatural type species of the genus Staphylococcus Rosenbach 1884.

3. The strain labeled 8532 in the National Collection of Type Cultures, London, is designated as the neotype strain of the species Staphylococcus aureus Rosenbach 1884.

Opinion 18. Legitimacy of the epithets typhosa and typhi when applied to the organism which causes enteric fever.*

The specific epithet typhosa in the name of the species Salmonella typhosa (Zopf) White has priority over the specific epithet typhi in the species name Salmonella typhi (Schroeter) Warren and Scott, its basonym being Bacterium typhosum Zopf 1884.

*The International Committee on Bacteriological Nomenclature requested that a survey of current usage be made before final formulation and issuance of this OPINION.

Opinion 19. Conservation of the generic name Rickettsia da Rocha-Lima and of the species name Rickettsia prowazekii.

1. The generic name Rickettsia da Rocha-Lima is conserved against Stricheria Stempell, and the specific epithet prowazekii in the species name Rickettsia prowazekii da Rocha-Lima is conserved against the specific epithet jurgensi first used in the species name Stricheria jurgensi Stempell.

2. The generic name Stricheria Stempell and the species name Stricheria jurgensi Stempell are rejected and placed in the appropriate lists of rejected names.

Opinion 20. Status of new generic names of bacteria published without names of included species.

1. Name of a hypothetical genus. A hypothetical genus is one in which no species is described, named, or cited; the existence of the genus is predicated upon the future discovery and description of species as yet unknown. A name applied to a hypothetical genus is not validly published and may be placed in the list of nomina rejicienda.

2. Name of a "temporary" genus. A generic name proposed for a genus whose sole function is to serve as the temporary generic haven for insufficiently described species, which species may be allocated later to an appropriate genus or genera, is to be regarded as not validly published. Such a name may be placed in the list of nomina rejicienda.

3. Name of a new genus with a described species which is neither named nor identified with a previously named species. A new generic name published in a combined description of a genus and species, without the species being named, without citation of a previously and effectively published description of the species, and without subsequent acceptance of the generic name and naming of the species by a later author, should be regarded as not validly published. Such a generic name may be placed in the list of nomina rejicienda.

However, if a later author has recognized the generic name and has used it with a specific epithet in naming the species described by the first author, particularly if there has been later general acceptance of the name, there may be validation of the generic name as proposed by its author, with the name of the species ascribed to the later author who gave it. Proposals for such validations of names should be made to the Judicial Commission for appropriate action.

4. Name of a new genus proposed to include one or more described and named species, but without simultaneous publication of the binary combination of generic name and specific epithet. A published generic name applied to a new genus in which the generic name is not used with a specific epithet in naming any species, but in which there is citation of a previously and effectively published description of a species under another name, is to be regarded as validly published and the consequent combinationes novae ascribed likewise to the author of the generic name.

Opinion 21. Status of the generic name Selenomonas von Prowazek.

1. The generic name Selenomonas von Prowazek 1913 was validly published with an accompanying description of the genus.

2. The species Spirillum sputigenum Flügge is characterized and adequate references to description given: It was definitely assigned to the genus.

3. Selenomonas sputigena (Flügge) von Prowazek (basonym Spirillum sputigenum Flügge) is the type species of Selenomonas.

4. The generic name Selenomonas von Prowazek is placed in the list of nomina generum conservanda.

Opinion 22. The status of the generic name Asterococcus and conservation of the generic name Mycoplasma.

1. The generic name Asterococcus Borrel, Dujardin-Beaumetz, Jeantet and Jouan 1910 is a later homonym of Asterococcus Scherffel 1908, and hence illegitimate.

2. The generic name Mycoplasma Nowak 1929 is placed in the list of bacterial nomina generum conservanda as the first legitimate generic name proposed to replace Asterococcus. The type species is Mycoplasma mycoides as determined by the basonym Asterococcus mycoides Borrel et al.

Opinion 23. Status of the generic names Nitromonas, Nitrosomonas, Nitrosococcus, and Nitrobacter.

1. The generic name Nitromonas Winogradsky 1890 is placed in the list of nomina generum rejicienda.

2. The generic name Nitromonas Orla-Jensen 1909 is a later homonym of Nitromonas Winogradsky and a later synonym of Nitrobacter Winogradsky. It is placed in the list of nomina generum rejicienda.

3. The generic name Nitrosomonas Winogradsky 1892 is placed in the list of nomina generum conservanda with Nitrosomonas europaea Winogradsky as the nomenclatural type species.

4. The generic name Nitrosococcus Winogradsky 1892 is placed in the list of nomina generum conservanda, with the species described by Winogradsky and later named Nitrosococcus nitrosus (Migula) Buchanan as the nomenclatural type.

5. The generic name Nitrobacter Winogradsky 1892 is placed in the list of nomina generum conservanda, with the species described by Winogradsky and later named Nitrobacter winogradskyi Winslow et al. as the nomenclatural type.

Opinion 24. Rejection of the generic name Arthrobacter Fischer 1895 and conservation of the generic name Arthrobacter Conn and Dimmick 1947.

1. The name Arthrobacter Fischer 1895 proposed as the name of a hypothetical genus of bacteria was not validly published and has no standing in nomenclature.

2. The generic name Arthrobacter Conn and Dimmick 1947 was validly published as a nomen novum. It is neither an emendation of Arthrobacter Fischer 1895 nor a later homonym.

Opinion 25. (Draft Proposal) Status of the generic name Chlamydozoon von Prowazek 1908

Draft proposal 25 relative to the status of the generic name Chlamydozoon von Prowazek was considered, but no action taken pending further study.

MEETING OF THE JUDICIAL COMMISSION, AUGUST 5, 1958

Present were R.E. Buchanan (Chairman), C.H. Andrewes, A.A. Miles, E.G.D. Murray, J. Ramsbottom, P. Schaeffer, M.P. Starr (alternate for C.B. van Niel), and W.A. Clark and S.T. Cowan, Secretaries.

Minute 10. Reference back of Opinion 18. Opinion 18 had been referred back to the Commission by the Nomenclature Committee for reconsideration. Action was deferred to give the Chairman time to prepare a statement for postal circulation to Commissioners.

Minute 11. International Bulletin. The Nomenclature Committee does not at this time desire a change of printing of the International Bulletin of Bacteriological Nomenclature and Taxonomy. The Commission maintained its opinion that the Editorial Board should find out the cost of printing the Bulletin in a new format.

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Minute 12. New Subcommittees on Taxonomy. The Chairman reported that a group of workers interested in the actinomycetes was meeting at the same time as this Congress. Also another group was considering the taxonomy of the azotobacters and it was likely that both groups would apply for recognition as taxonomic subcommittees of the International Committee on Bacteriological Nomenclature.

Minute 13. Proposed Symposium on Microbial Taxonomy. The secretaries were instructed to make a formal request through the International Committee on Bacteriological Nomenclature to the Executive Committee of the IAMS to seek a grant-in-aid from the International Union of Biological Sciences for holding of a symposium on microbial taxonomy and nomenclature at the next International Congress.

S. T. Cowan
W. A. Clark

Joint Permanent Secretaries

INTERNATIONAL BULLETIN OF BACTERIOLOGICAL
NOMENCLATURE AND TAXONOMY
Vol. 8, Nos. 3-4 October 15, 1958 pp. 145-149

MINUTES OF THE MEETINGS OF THE INTERNATIONAL COMMITTEE ON BACTERIOLOGICAL NOMENCLATURE HELD AT STOCKHOLM IN CONNECTION WITH THE VII INTERNATIONAL CONGRESS FOR MICROBIOLOGY, JULY-AUGUST, 1958

Those present were E.G.D. Murray (Canada, Chairman), A. Sordelli (Argentina), V.B.D. Skerman (Australia), F. Kauffmann (Denmark), P. Schaeffer (France), C. H. Andrewes, T. Gibson, A.A. Miles, and J. Ramsbottom (Great Britain), R.E. Buchanan, W.H. Ewing (alternate for O.N. Allen), and M.P. Starr (alternate for C.B. van Niel) (U.S.A.), V.D. Timakov (alternate for G.V. Vygodtchikov) and V. Troitsky (U.S.S.R.), and W.A. Clark and S.T. Cowan, Permanent Secretaries.

Minute 1. Apologies for absence were received from O.N. Allen, C.B. van Niel, and G.V. Vygodtchikov, and their alternates, W.H. Ewing, M.P. Starr, and V. Timakov, respectively, were accepted.

Announcement was made of the death of E. Böcker, A.J. Kluyver, F. Szymanoski, and Th. Thjøtta.

Resignations of P. Hauduroy, A. Lwoff, E. Renaux, G. Segretain, J. Voss, and T. Wikén were accepted with regret.

Minute 2. Minutes of the last meeting, published in the Bulletin, 1953, 3:155-161 were corrected (p.159, minute 7, regarding Opinions 1-5, changed to read "Objections had been raised to Opinions 3 and 4") and approved.

Minute 3. Matters arising from the Minutes. The annotated Bacteriological Code, authorized at the Rome Congress, was published in June, 1958. A proposal of the Judicial Commission, viz. that no changes be made in the Code before the VIII International Congress, was accepted.

It was agreed that the English version of the Code be designated the definitive text.

Minute 4. Election of new Joint Secretary. Dr. T. Wikén resigned the post of Joint Secretary for Nonmedical Bacteriology in April, 1957. W.A. Clark had acted temporarily in his place and was now proposed as Permanent Joint Secretary. He was elected unanimously.

Minute 5. Nominations for Commissioners. Nominations were asked for six Commissioners, four to replace the 7th Class, whose term of office expires at the end of the present Congress, and two additional members to be elected, one to the 8th Class and one to the 9th Class, to replace two members who have died.

Minute 6. Relation of the Nomenclature Committee to the International Union of Biological Sciences. The Committee acknowledged receipt of grants-in-aid from the International Union of Biological Sciences and at the request of the IUBS made recommendations to the Executive Committee of the International Association of Microbiological Societies on the distribution of any funds that may be available for the encouragement of culture collections. The Judicial Commission was authorized to appoint a Subcommittee to advise the Executive Committee on this allocation.

Minute 7. Relation of the Nomenclature Committee to the Executive Committee of the International Association of Microbiological Societies. As the oldest continuing organization the Committee thought it desirable that it should be represented on the Executive Committee of the International Association of Microbiological Societies, and the following proposal was agreed to. The Nomenclature Committee proposes that the Executive Committee of the IAMS be authorized by the Congress to add to its statutory membership a member of the Nomenclature Committee to be nominated by the Nomenclature Committee. It was also agreed that if this recommendation is accepted, Dr. E. G. D. Murray will be the Nomenclature Committee's representative.

Minute 8. Report of the Editorial Board. The Chairman of the Editorial Board, R.E. Buchanan, outlined the difficulties of printing the International Bulletin. It is hoped that profits from the sale of the annotated Bacteriological Code will provide a fund to enable the Bulletin to be set in type rather than reproduced by the offset process. It has been suggested that a change in the long title be considered. The Editors were authorized to find out costs of printing the Bulletin in a new and more attractive format.

Minute 9. Opinions issued. Opinion 15 had been issued and published in the Bulletin (8:73, 1958) and is given in full

on page 112 of the annotated Bacteriological Code. Opinions 15,16,17,19,20,21,22,23, and 24 were approved for publication. Opinion 18, relating to the correct specific epithet to use for the typhoid bacillus was referred back to the Judicial Commission for reconsideration. It was pointed out that the epithet typhosa in the name Salmonella typhosa has priority under the Bacteriological Code of Nomenclature over typhi in the name Salmonella typhi. However, the International Committee felt that a survey should be made to determine the relative frequency of use of S. typhosa and S. typhi, and to consider the action of the Enterobacteriaceae Subcommittee in recommending the approval of Salmonella typhi on the basis of usage before a final decision was made. The taxonomic Subcommittee on Enterobacteriaceae has recommended that the epithet typhi be used in the combination Salmonella typhi.

The meeting adjourned until 4 August.

MINUTES OF THE NOMENCLATURE COMMITTEE MEETING
4 AUGUST 1958

Those present were E.G.D. Murray (Canada, Chairman), A. Sordelli (Argentina), W. Zischke (Austria), F. Kauffmann (Denmark), E. Mustakallio (Finland), A.R. Prévot, P. Schaeffer, and J. Jacquet (France), J. Potel (alternate for H. Seeliger) (Germany), C.H. Andrewes, T. Gibson, A.A. Miles, J. Ramsbottom, and G.S. Wilson (Great Britain), P.J. Oeding and S.D. Henriksen (Norway), R.E. Buchanan, W.H. Ewing (alternate for O.N. Allen), and M.P. Starr (alternate for C.B. van Niel) (U.S.A.), N. Krassilnikov (U.S.R.R.), and W.A. Clark and S.T. Cowan (Secretaries).

Minute 10. Reports of the Subcommittees. Reports were presented by the Enterobacteriaceae, Virus, and Neisseriaceae Subcommittees. These reports were accepted and publication authorized, with the understanding that any recommendations relating to nomenclature be referred to the Judicial Commission. Other Subcommittees were meeting during the Congress and their reports will be published in the Bulletin.

a. The Report of the Enterobacteriaceae Subcommittee included certain recommendations, namely 1) that serotype designations should not be regarded as specific epithets but

as infrasubspecific forms, and 2) that the generic name Paracolobactrum and the genus Paracolobactrum should be rejected. These recommendations were accepted as addenda to the report published in the Bulletin, 1958, 8:25-70, 72-95.

b. It was decided to thank the Neisseriaceae Subcommittee members for the valuable work they had completed and to disband the Subcommittee.

Minute 11. Formation of New Subcommittees. The World Health Organization had requested that the Nomenclature Committee set up a new Subcommittee on Brucella. Dr. A.W. Stableforth had agreed to act as chairman. The following are to be invited to become members: R.E. Housewright, M.M. Kaplan, N.B. McCullough, K.F. Meyer, G. Renoux, G.C. van Drimmelen, P.A. Vereshilova, G.S. Wilson, and Lois Jones (Secretary).

The procedure for authorizing taxonomic subcommittees was discussed, and it was found that provisions 4 and 5 of the Code would enable temporary authorization of a subcommittee on Actinomycetes, to be made if such was wanted by the specialist workers who met in Stockholm.

Minute 12. Election of Commissioners. Six members had been nominated and a ballot was held to determine to which Class the members would be elected.

8th Class: A. Sordelli, Posodas 1553, Martinez F.C.N.G.B.M., Buenos Aires, Argentina.

9th Class: S. Soriano, Instituto de Microbiologia Agricola, Villa Orturar - Suc. 17, Buenos Aires, Argentina.

10th Class: F. Kauffmann, Statens Seruminstitut, Amager Boulevard 80, Copenhagen, S. Denmark.
P. Schaeffer, Institute Pasteur, Paris, France.
H. Seeliger, Hygiene-Institut de Universitat Bonn, Venusberg, Bonn, Germany.
V.M. Zhdanov, Institute of Virusology, Academy of Medical Sciences, Moscow, U.S.S.R.

Minute 13. Proposed change of Bulletin was discussed. It was agreed that the Bulletin should have a colored cover and should be so bound that the pages can be opened flat. The Committee did not agree to a proposal that the Bulletin should be printed in type or should change its title.

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Minute 14. The following new members were accepted by the Committee upon recommendations of the several national Microbiological Societies. These memberships were confirmed by the Plenary Session of the VII International Microbiological Congress.

P. Schaeffer, Institut Pasteur, Paris, France.
J. Jacquet, Faculté des Sciences, Caen, France
J. Senez, Station de Microbiologie du C.N.R.S., 66 Rue St. Sebastien, Marseille, France.

P.J. Oeding, Gades Institute, University of Bergen, Bergen, Norway.
Rolf F. Saxholm, Bacteriology Department, State Institute of Public Health, Oslo, Norway.

K. Lachowicz, State Institute of Hygiene, 24, Chocimska Str., Warsaw, Poland.
S. Slopek, Institute of Immunology, 4 Chalubinskiego Str., Wroclaw, Poland.

N.A. Krassilnikov, Institute of Microbiology, Academy of Sciences, Moscow, U.S.S.R.
V.L. Ryzhkov, Institute of Virusology, Academy of Medical Sciences, Moscow, U.S.S.R.
V.L. Troitsky, Institute of Epidemiology and Microbiology, Academy of Medical Sciences, Moscow, U.S.S.R.
G.V. Vygodtchikov, Institute of Epidemiology and Microbiology, Asademy of Medical Sciences, Moscow, U.S.S.R.
V.M. Zhdanov, Institute of Virusology, Academy of Medical Sciences, Moscow, U.S.S.R.

S.T. Cowan
W.A. Clark

Joint Permanent Secretaries

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NOMENCLATURE AND TAXONOMY
Vol. 8, Nos. 3-4 October 15, 1958 p. 151

OPINION 16

Conservation of the Generic Name Chromobacterium Bergonzini 1880 and Designation of the Type Species and the Neotype Culture of the Type Species

Sneath (1956) has asked for an Opinion relative to the legitimacy of the generic name Chromobacterium Bergonzini. He notes that Chromobacterium Bergonzini 1879 included four species, one of which has not since been recognized, the three others are now generally included in the genus Pseudomonas. Pseudomonas Migula is, therefore, a later synonym of Chromobacterium Bergonzini, but by international agreement (Opinion 5) Pseudomonas Migula has been conserved against all earlier synonyms. In 1880 (or 1881, the exact date of the publication is uncertain), Bergonzini placed a new species, Chromobacterium violaceum, in this genus and said it was not the same as Schroeter's Bacteridium violaceum 1872.*

Chromobacterium Bergonzini has been commonly accepted as a generic name for the violet bacteria. Sneath proposes that Chromobacterium Bergonzini 1880 be conserved against Chromobacterium Bergonzini 1879. Only one species, Chromobacterium violaceum Bergonzini 1880, was included and under Rule 9c(3)b this species is the nomenclatural type.

Sneath calls attention to the fact that there is not unanimity of opinion as to the characteristics of Chromobacterium violaceum and there has been no designated type strain or culture. He proposed, therefore, that a neotype culture be agreed upon for the species and suggests that the strain labeled MK in his collection (American Type Culture Collection 12472 and National Collection of Type Cultures 9757) shall be designated as the neotype strain.

It should be noted that the neotype proposed by Sneath is mesophilic whereas Eltinge (1957) suggests a psychrophil for this species. Evidence is lacking to indicate whether

*In fact Bergonzini created a new genus Chromococcus to provide for Schroeter's organism, giving it the name Chromococcus violaceum (Schroeter) Bergonzini. It is apparent, therefore, that Schroeter should not appear in the author citation of Chromobacterium violaceum.

Bergonzini described a mesophilic or a psychrophilic bacterium, and choice of a neotype strain necessitates an arbitrary decision.

The following Opinion 16 was approved unanimously by the Judicial Commission and by the International Committee on Bacteriological Nomenclature at meetings held in August 1958 in Stockholm, in connection with the meeting of the VII International Microbiological Congress.

Opinion 16

1. The generic name Chromobacterium Bergonzini 1879 is rejected and placed in the list of nomina generica rejicienda.

2. The generic name Chromobacterium Bergonzini 1880 is conserved and placed in the list of nomina generica conservanda.

3. The type species of the genus Chromobacterium Bergonzini 1880 is Chromobacterium violaceum Bergonzini 1880.

4. A neotype strain of Chromobacterium violaceum Bergonzini 1880 is designated and has been deposited in the American Type Culture Collection, Washington, D.C. (12472) and in the National Collection of Type Cultures, London (9757).

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OPINION 17

Conservation of the Generic Name *Staphylococcus* Rosenbach, Designation of *Staphylococcus aureus* Rosenbach as the Nomenclatural Type of the Genus *Staphylococcus aureus* Rosenbach, and Designation of a Neotype Culture of *Staphylococcus aureus* Rosenbach

Gibson (1953) asked the Judicial Commission to issue an Opinion on the status of the generic name *Staphylococcus* Rosenbach and *Micrococcus* Cohn. In 1954 the Editorial Board issued a preliminary statement. Work is being done to distinguish these two genera, but it is not proposed to deal with the generic name *Micrococcus* at this time. However, the animal pathogens and saprophytes are clearly defined and it is appropriate to deal with Gibson's proposals concerning *Staphylococcus*.

Rosenbach 1884 used both the binomial *Staphylococcus aureus* and the illegitimate trinomial *Staphylococcus pyogenes aureus*, but he never used the binomial *Staphylococcus pyogenes*. The binary combination *Staphylococcus aureus* Rosenbach is recognized as the nomenclatural type of the genus *Staphylococcus* Rosenbach 1884.

In the absence of a designated type culture, Shaw, Stitt, and Cowan (1951) proposed FDA 209-P (NCTC 7447) as a neotype culture. However, later Cowan, Shaw, and Williams (1954) withdrew this proposal because the strain had phage characters typical of strains from cattle. Since Rosenbach had been describing strains from infections in man, it was thought better to propose a strain of human origin (NCTC 8532).

Breed (1956) and Evans, Bradford, and Niven (1955) approved the choice of NCTC 8532 as neotype strain as it has all the characters recognized in modern work as typical of the pathogenic strains. On the other hand, Thatcher and Simon (1957) expressed a preference for strain FDA 209-P (NCTC 7447).

The Judicial Commission and the International Committee on Bacteriological Nomenclature approved the following Opinion (No. 17) at their meetings at Stockholm August, 1958, during the VII International Microbiological Congress.

Opinion 17

1. The generic name Staphylococcus Rosenbach 1884 is conserved and placed in the list of nomina generum conservanda.

2. Staphylococcus aureus Rosenbach 1884 is recognized as the nomenclatural type species of the genus Staphylococcus Rosenbach 1884

3. The strain labeled 8532 in the National Collection of Type Cultures, London, is designated as the neotype strain of the species Staphylococcus aureus Rosenbach 1884.

REFERENCES

Breed, Robert S. 1956. Staphylococcus pyogenes Rosenbach. Internatl. Bull. Bact. Nomen. Tax. 6:35-42.

Cohn, Ferdinand. 1872. Untersuchungen über Bacterien. Beitr. Biol. Pflanz. 1:127-224.

Cowan, S.T., Constance Shaw, and R.E.O. Williams. 1954. Type strain for Staphylococcus aureus Rosenbach. Jour. Gen. Microbiol. 10:174.

Editorial Board. 1954. The bacterial generic names Micrococcus and Staphylococcus. Preliminary Statement. Internatl. Bull. Nomen. Tax. 4:163-166.

Evans, J.B., W.L. Bradford, and C.R. Niven. 1955. Comments concerning the taxonomy of the genera Micrococcus and Staphylococcus. Internatl. Bull. Bact. Nomen. Tax. 5: 61-66.

Gibson, R. 1953. The status of the generic names Micrococcus and Staphylococcus and of the species name Staphylococcus aureus. Internatl. Bull. Bact. Nomen. Tax. 3:129-133.

Rosenbach, F.G. 1884. Mikroorganismen bei den Wundinfectionskrankheiten des Menschen. Wiesbaden (J.F. Bergmann's Verlag).

Shaw, C., J.M. Stitt, and S.T. Cowan. 1951. Staphylococci and their classification. Jour. Gen. Microbiol. 5: 1010-1023.

Thatcher, F.S. and W. Simon. 1957. Some physiological and toxigenic properties of members of the genus Micrococcus in relation to taxonomy. Internatl. Bull. Bact. Nomen. Tax. 7:21-36.

STATUS OF PROPOSED DRAFT OF OPINION 18

Legitimacy of the Specific Epithets *typhosa* and *typhi* as used in the Species Names *Salmonella typhosa* and *Salmonella typhi*

Editorial Board

The Judicial Commission at its recent Stockholm meeting considered a proposal to issue an Opinion relative to the specific epithet to be used for the organism originally described by Eberth from "typhus abdominalis." The species names *Salmonella typhosa* and *Salmonella typhi* are both in current use. The following statement was considered by the Judicial Commission

Draft for Opinion 18

Dr. R.S. Breed (1955) requested an Opinion as to the legitimacy of the specific epithets *typhosa* and *typhi* as used in species names *Salmonella typhosa* and *S. typhi*. Eberth (1880), who first described the organisms from a case of typhoid fever, did not propose a name. The following names were proposed for this organism during the next several years.

Bacillus typhosus Klebs 1880. The name was validly published, but the organism described was later found not to be the cause of typhoid fever, and not the organism described by Eberth.

Bacterium typhosum Zopf 1884. Proposed as the name for the organism described by Eberth. Validly published.

Bacillus typhosus Zopf 1885. A transferrence of *Bacterium typhosum* Zopf to the genus *Bacillus*. Validly published. The name *Bacillus typhosus* Zopf 1885 is a later homonym of *Bacillus typhosus* Klebs 1880, and hence illegitimate.

Bacillus typhi Schroeter 1886. Validly published, but a later synonym of *Bacterium typhosum* Zopf 1884. Date of publication 16th August 1886.

Bacillus typhi-abdominalis Flügge 1886. Validly published. A later synonym of *Bacterium typhosum* Zopf 1884.

Presumably a later synonym of Bacillus typhi Schroeter 1886, as the publication has its Preface dated 24th August 1886; the preface must have been written before the distribution of the publication.

Salmonella typhi (Schroeter) Warren and Scott 1930. A transferrence of Bacillus typhi Schroeter 1886 to the genus Salmonella.

Salmonella typhosa (Zopf) White 1930. A transferrence of Bacterium typhosum Zopf to the genus Salmonella.

Draft Request for Opinion 18

Draft Proposal No. 1. The specific epithet typhosa in the name of the species Salmonella typhosa (Zopf) White has priority over the specific epithet typhi in the species name Salmonella typhi (Schroeter) Warren and Scott, its basonym being Bacterium typhosum Zopf 1884.

Draft Proposal No. 2. The specific epithet typhi in the name of the species Salmonella typhi (Schroeter) Warren and Scott is conserved over the specific epithet typhosa in the name Salmonella typhosa (Zopf) White 1930, by the recognition of Bacillus typhi Schroeter 1886 as the basonym.

REFERENCES

Breed, R.S. 1955. Salmonella typhosa versus Salmonella typhi. Internatl. Bull. Bact. Nomen. Tax. 5:165-168.

Eberth, C.J. 1880. Die Organismen in den Organen bei Typhus abdominalis. Arch. f. path. Anat., 81.

Flügge, C. 1886. Die Mikroorganismen. Aufl. 2:198.

Klebs, E. 1880. Handbuch d. path. Anat., 7. Leiferung, bearb. von Prof. Eppinger.

Schroeter, J. 1886. In Cohn, Kryptogamen-Flora von Schlesien. 3:165. Erste Hälfte, Abt. 2, J.U. Kern's Verlag, Breslau.

Warren, S.H. and W.M. Scott. 1930. A new serological type of Salmonella. Jour. Hyg. 29:415-417.

White, P. Bruce. 1930. Notes on organisms serologically related to S. enteritidis Gärtner I. The Dublin and Tokyo types of Salmonella. Jour. Hyg. 29:443-445.

Zopf, W. 1884. Die Spaltpilze. 2 Aufl., Breslau, Anhang, p. 90.
_____. 1885. Die Spaltpilze, Aufl. 3. Breslau. p. 125.

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After consideration it was agreed that from the standpoint of priority the Draft Proposal No. 1 was to be preferred, and this draft was approved. However, there were some differences of opinion expressed as to which specific epithet (typhosa or typhi) is the more commonly to be found in the current literature.

The Opinion was referred to the International Committee for review. The International Committee requested the Judicial Commission to reconsider the matter, and to endeavor to determine which specific epithet is the more commonly used, and what action should be taken to avoid confusion in nomenclature. Further, the Subcommittee on Taxonomy of the Enterobacteriaceae at its Stockholm meeting expressed the opinion that acceptance of typhi rather than typhosa would minimize confusion in the literature.

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The above statement has been sent to each member of the International Committee on Bacteriological Nomenclature with the following request:

Please assist the Judicial Commission to reach a satisfactory decision by answering the following questions:

1. From your observations which of the following specific epithets is the more commonly used in scientific and technical literature?

a. typhosa (in Salmonella typhosa) ___
b. typhi (in Salmonella typhi) ___ Check one.

2. From the standpoint of stable bacteriological nomenclature, which of the following specific epithets do you prefer?

a. typhosa (in Salmonella typhosa) ___
b. typhi (in Salmonella typhi) ___ Check one.

OPINION 19

Conservation of the Generic Name Rickettsia da Rocha-Lima and of the Species Name Rickettsia prowazekii da Rocha-Lima

Philip (1952) requested the Judicial Commission to conserve the generic name Rickettsia da Rocha-Lima against Stricheria Stempell, and to conserve the specific epithet prowazekii against jurgensi first used in the species Stricheria jurgensi Stempell.

Stricheria jurgensi was the specific epithet validly published by Stempell on 13th April 1916, more than a month before da Rocha-Lima used Rickettsia prowazekii (22nd May 1916). No one disputes that these names were both applied to the same organism.

By the principle of priority the correct name is Stricheria jurgensi, but this name has not been used since its first publication. On the other hand Rickettsia prowazekii has been in use for forty years, and to abandon it now on favor of an unknown name would clearly throw science into confusion.

Disadvantageous changes of a name of a taxon in common use which is a later synonym can be avoided only by invoking Provision 2 of the Bacteriological Code and action by the Judicial Commission.

The following Opinion 19 was approved unanimously by the Judicial Commission and by the International Committee on Bacteriological Nomenclature at meetings held in August 1958 in Stockholm, in connection with the meeting of the VII International Microbiological Congress.

Opinion 19

1. The generic name Rickettsia da Rocha-Lima is conserved against Stricheria Stempell, and the specific epithet prowazekii in the species name Rickettsia prowazekii da Rocha-Lima is conserved against the specific epithet jurgensi first used in the species name Stricheria jurgensi Stempell.

REFERENCES

Philip, Cornelius B. 1952. Conservation of the generic name Rickettsia and of the specific epithet prowazekii in the species name Rickettsia prowazekii. Internatl. Bull. Bact. Nomen. Tax. 2:69-70.

da Rocha-Lima, H. 1916. Zur Aetiologie des Fleckfiebers. Berl. klin. Wchnschr. 53:567-569.

Stempell, W. 1916. Ueber einen als Erreger des Fleckfiebers verdächtigen Parasiten der Kleiderlaus. Deutsch. Med. Wchnschr. 42:439-442.

OPINION 20

Status of New Generic Names of Bacteria Published Without Names of Included Species

A request from Lessel and Breed (1954) for an Opinion relative to the validity of publication of the generic name Selenomonas von Prowazek has made necessary a study of the validity of publication and the legitimacy of the names of genera of bacteria that have been proposed without the inclusion of any new binary combination giving the name of at least one species placed within the new genus. There are numerous examples of the proposal of such generic names for bacteria. These proposals may be divided into several categories.

1. Name of a hypothetical genus. Generic names have in some cases been proposed for genera of bacteria whose existence is merely postulated, i.e., for genera of bacteria as yet undiscovered. Fischer (1895) proposed the generic name Clostrinium with the statement "Bis jetzt keine Art bekannt." No species apparently has later been assigned to this genus.

2. Name of a "temporary" genus. The name of a "temporary" genus is one which has been applied to a group of bacterial species insufficiently described to be placed definitely in any one of the recognized genera of bacteria. For example, Kendall (1902) proposed the generic name Bacterius for a genus to include those rod-shaped bacteria in which the presence of the distribution of flagella was unknown. This generic name has apparently never been used.

3. A generic name proposed for a single species which is described but to which no specific epithet is given or indicated. Winogradsky (1892) proposed the name Nitrobacter for a newly described genus of bacteria containing a single species. He did not complete the naming of the species by proposing a specific epithet. However, a specific epithet for this species was later proposed by Winslow et al. (1917). Apparently Winogradsky in some of his earlier writings followed the early Linnaean practice of regarding unnecessary the proposal of a specific epithet in a genus which contained one species only.

4. Name of a genus proposed to include any one or more previously described named species of bacteria, but without simultaneous publication of any new binary combination. Von Prowazek (1913) published a description and figured a new genus to which he gave the name Selenomonas. He also cited the names of previously described species which he included in the genus, but in no case die he spell out the new combination required for any included species.

The following Opinion 20 was approved unanimously by the Judicial Commission and by the International Committee on Bacteriological Nomenclature at their meetings in August, 1958 at Stockholm, Sweden at the time of the VII International Microbiological Congress.

Opinion 20

1. Name of a hypothetical genus. A hypothetical genus is one in which no species is described, named, or cited; the existence of the genus is predicated upon the future discovery and description of species as yet unknown. A name applied to a hypothetical genus is not validly published and is to be placed in the list of nomina rejicienda.

2. Name of a "temporary" genus. A generic name proposed for a genus whose sole function is stated to be to serve as the temporary generic haven for insufficiently described species, which species may be allocated later to an appropriate genus or genera, is to be regarded as not validly published. Such a name may be placed in the list of nomina rejicienda.

3. Name of a new genus with a described species which is neither named nor identified with a previously named species. A new generic name published in a combined description of a genus and species, without the species being named, without citation of a previously and effectively published description of the species, and without subsequent acceptance of the generic name and naming of the species by a later author, should be regarded as not validly published. Such a generic name may be placed in the list of nomina rejicienda.

However, if a later author has recognized the generic name and has used it with a specific epithet in naming the species described by the first author, particularly if there

has been later general acceptance of the name, there may be validation of the generic name as proposed by its author, with the name of the species ascribed to the later author who gave it. Proposals for such validations of names should be made to the Judicial Commission for appropriate action.

4. Name of a new genus proposed to include one or more previously described and named species, but without simultaneous publication of the new binary combination of generic name and specific epithet. A published generic name applied to a new genus in which the generic name is not used in a binary combination in naming any species, but in which there is citation of a previously and effectively published description of a species under another name, is to be regarded as validly published and the consequent combinationes novae ascribed likewise to the author of the generic name.

REFERENCES

Fischer, Alfred. 1895. Untersuchungen uber Bakterien. Jahrb. f. wissensch. Bot. 27:1-163.

Kendall, Arthur I. 1902. A proposed classification and method of graphical tabulation of the characters of bacteria. Proc. Amer. Pub. Health Ann. 28:484.

Lessel, Erwin F. and Robert S. Breed. 1954. Selenomonas Boskamp, 1922--A genus that includes species showing an unusual type of flagellation. Bacteriol. Revs. 18:165-169.

von Prowazek, S. 1913. Zur Parasitologie von Westafrica. Centr. Bakt. Parasitenk., Abt. I, Orig. 88:58-73.

Winogradsky, Sergius. 1892. Contributions a la morphologie des organismes de la nitrification. Arch. Sci. Biol. p. 87.

Winslow, C.E.A. et al. 1917. Preliminary report. The families and genera of bacteria. Jour. Bact. 2:552.

OPINION 21

Conservation of the Generic Name *Selenomonas* von Prowazek

Von Prowazek (July 1913) proposed as a generic name *Selenomonas* to include a species which he described from blood smears from various African game animals (gazelle, giraffe, harness antelope) which had been shot with some escape of gut contents into the blood stream. He published 9 colored illustrations. He did not give a binary combination (did not propose a specific epithet) for the organisms he described. However, he cited the names of two organisms previously described by other authors. He noted the close resemblance of his organisms to *Spirillum sputigenum* Flügge (1886) and to the *Ancyromonas ruminantium* of Certes. Woodcock and Lapage (November 1913) concluded that *Ancyromonas ruminantium* Certes (1889) was incorrectly placed in the genus *Ancyromonas* and proposed that it be transferred to a new genus *Selenomastix*, becoming *Selenomastix ruminantium* (Certes) Woodcock and Lapage.

Apparently the first recognition after publication of the generic name *Selenomonas* von Prowazek was by Simons (1920) who, in a footnote in an article on certain microorganisms present in the caecum of the guinea pig, stated that one organism found belonged in von Prowazek's *Selenomonas* and would be described in a later publication. Simons (1921) named this organism *Selenomonas palpitans*; a more complete description was published by Boskamp (1922).

Wenyon (1926) recognized the priority of *Selenomonas* von Prowazek over *Selenomastix* Woodcock and Lapage, and renamed the organism *Selenomonas ruminantium* (Certes) Wenyon.

The generic name *Selenomonas* von Prowazek apparently was validly published. Although the new species described and figured in detail was not named, two other species, *Spirillum sputigenum* Flügge and *Ancyromonas ruminantium* Certes were included together with a "description of the group."

The name of the type species of a new genus must be taken from one of the species described or indicated in the original article in which the genus is described. Inasmuch as the species *Selenomonas palpitans* Simons was not in von Prowazek's

list of species, the proposal by Lessel (1957) that this be recognized as the name of the type species cannot stand. Study of von Prowazek's paper does not indicate that he regarded the organism which he described as the same as Selenomonas ruminantium. This is unfortunate, for the new species was described and figured in detail. The suggestion is made in the Judicial Commission's Preliminary Statement (1955) that Selenomonas sputigena (Flügge) von Prowazek be designated as the type species. However, Boskamp (1922) apparently first used the combination S. sputigena and the new combination should be ascribed to him, as Selenomonas sputigena (Flügge) Boskamp.

The following Opinion 21 was approved unanimously by the Judicial Commission and by the International Committee on Bacteriological Nomenclature at meetings held in August 1958 in Stockholm, in connection with the meeting of the VII International Microbiological Congress.

Opinion 21

1. The generic name Selenomonas von Prowazek 1913 was validly published with an accompanying description of the genus.

2. The species Spirillum sputigenum Flügge 1886 was characterized and adequate references to description given. The species was assigned to the genus Selenomonas.

3. Selenomonas sputigena (Flügge) Boskamp 1922 (basonym Spirillum sputigenum Flügge) is designated as the type species of Selenomonas von Prowazek.

4. The generic name Selenomonas von Prowazek 1913 is placed in the list of nomina generum conservanda.

REFERENCES

Boskamp, E. 1922. Ueber Bau, Lebensweise und Systematische Stellung von Selenomonas palpitans (Simons). Centr. Bakt. Parasitenk., Abt. I, Orig. 88:58-73.

Certes, A. 1889. Note sur les micro-organismes de la panse des ruminants. Bull. Soc. Zool. France, 14:70-73.

Flügge, C. 1886. Die Microorganismen. Leipzig.

Judicial Commision. 1955. Status of the generic name Selenomonas von Prowazek. Internatl. Bull. Bact. Nomen. Tax. 5:7-12.

Lessel, E. 1957. Selenomonas von Prowazek 1913, in: Bergey's Manual of Determinative Bacteriology. 7th ed. p. 258.

Simons, H. 1920. Eine saprophytische Oscillarie im Darm des Meerschweinchens. Centr. Bakt. Parasitenk. Abt. 2. 50: 356-368.

_____. 1921. Ueber Selenomonas palpitans n.sp. Centr. Bakt. Parasitenk., Abt. I, Orig., 87:50.

von Prowazek, S. 1913. Zur Parasitologie von Westafrica. Centr. Bakt. Parasitenk., Abt. I, Orig. 88:58-73.

Wenyon, Charles Morley. 1926. Protozoology; A Manual for Medical Men, Veterinarians, and Zoologists. 2 vol. 1563 pp. London, Baillier, Tindall and Cox.

Woodcock, H.M. and G. Lapage. 1913. On a remarkable type of protistan parasite. Quart. Jour. Microbiol. Sci., N.S. 59:431-458.

OPINION 22

Status of the Generic Name *Asterococcus* and Conservation of the Generic Name *Mycoplasma*

Species names that have been proposed for the organism of bovine pleuropneumonia are:

1. *Asterococcus mycoides* Borrel, Dujardin-Beaumetz, Jeantet and Jouan 1910 was validly published, but is a later homonym of *Asterococcus* Scherffel 1908 and hence illegitimate.

2. *Coccobacillus mycoides peripneumoniae* Martzinovski 1911 is a trinomial and hence illegitimate.

3. *Micromyces peripneumoniae bovis contagiosae* Frosch 1923. *Micromyces* Frosch is a later homonym of two validly published earlier generic names (*Micromyces* Dangeard 1889 and *Micromyces* Grüber 1891), and hence illegitimate.

4. *Mycoplasma peripneumoniae* Nowak 1929. The generic name was validly published and the older names were not available. The specific epithet is illegitimate and should be replaced with *mycoides* which has priority.

5. *Asteromyces peripneumoniae bovis* Wroblewski 1931. This combination was validly published, but both generic and specific names are later homonyms.

6. *Anulomyces agalaxiae* Wroblewski 1931. Proposed for the organism causing contagious agalactia in goats and sheep. Validly published but only legitimate if this organism is considered as belonging to a different genus from the causal organism of bovine peripneumonia.

7. *Borrelomyces peripneumoniae* Turner 1935. *Borrelomyces* was validly published but is a later synonym of other generic names for the same organism.

Freundt (1955) and Edward (1955) put forward proposals for the classification of the pleuropneumonia group of organisms, and each recognized the validity of the generic name *Mycoplasma*. Later (1956) they jointly proposed a classification and nomenclature which Freundt subsequently used in the 7th edition of Bergey's Manual of Determinative Bacteriology.

BACTERIOLOGICAL NOMENCLATURE AND TAXONOMY

The following Opinion 22 was approved unanimously by the Judicial Commission and by the International Committee on Bacteriological Nomenclature at meetings held in August, 1958 in Stockholm in connection with the meeting of the VII International Microbiological Congress.

Opinion 22

1. The generic name Asterococcus Borrel, Dujardin-Beaumetz, Jeantet, and Jouan 1910 is a later homonym of Asterococcus Scherffel 1908, and hence illegitimate.

2. The generic name Mycoplasma Nowak 1929 is placed in the list of bacterial nomina generum conservanda as the first legitimate generic name proposed to replace Asterococcus Borrel et al. The type species is Mycoplasma mycoides (Borrel et al.) Freundt 1955 (basonym Asterococcus mycoides Borrel et al.).

REFERENCES

Borrel, Dujardin-Beaumetz, Jeantet and Jouan. 1910. Le microbe de las peripneumonie. Ann. Inst. Past. 24:168.

Dangeard, P.A. 1889. Memoire sur les Chytridinées. Le Botaniste 4:39-74.

Editorial Board. 1955. The status and synonymy of the bacterial generic name Asterococcus. Internatl. Bull. Bact. Nomen. Tax. 5:13-20.

Edward, D.G. 1955. A suggested classification and nomenclature for organisms of the pleuropneumonia group. Internatl. Bull. Bact. Nomen. Tax. 5:85-94.

_____ and E.A. Freundt. 1956. The classification and nomenclature of organisms of the pleuropneumonia group. Jour. Gen. Microbiol. 14:197.

Freundt, E.A. 1955. The classification of the pleuropneumonia group of organisms. Internatl. Bull. Bact. Nomen. Tax. 5:67-78.

Frosch, P. 1923. Zur Morphologie des Lungenseucheerregers. II. Mit Arch. wiss. u. prakt. Tierheilkunde 49:273-282.

Grüber, M. 1891. Micromyces hoffmannii. Centr. f. Bakt. 10: 648.

Martzinovski, E.J. 1911. De l'etiologie de la péripneumonie. Ann. Inst. Past. 25:914-917.

Nowak, Julien. 1929. Morphologie, nature et cycle évolutif du microbe de la péripneumonie des bovides. Ann. Inst. Past. 43:1330-1352.

Sabin, Albert B. 1941. The filtrable microorganisms of the pleuropneumonia group. Bact. Revs. 5:1-68.

Scherffel, A. 1908. Asterococcus n.g. superbus (Cienk.) Scherffel and dessen angebliche Bezeichnungen zu Eremosphaera. Ber. deutsch. bot. Ges. 26A:762-771.

Turner, A.W. 1935. A study of the morphology and life cycles of the organism of pleuropneumonia contagiosa boum (Borrelomyces peripneumoniae nov. gen.) by observation in the living state under dark-ground illumination. Jour. Path. Bact. 41:1-32.

Wroblewski, W. 1931. Morphologie et cycle évolutif des microbes de la péripneumonie des bovides et de l'agalaxie contagieuse des chevres et des moutons. Ann. Inst. Past. 47:94-116.

OPINION 23

Rejection of the Generic Names *Nitromonas* Winogradsky 1890 and *Nitromonas* Orla-Jensen 1909, Conservation of the Generic Names *Nitrosomonas* Winogradsky 1892, *Nitrosococcus* Winogradsky 1892, and *Nitrobacter* Winogradsky 1892, and the Designation of the Type Species of these Genera

Winogradsky (1890) proposed *Nitromonas* as the name of a new genus of bacteria characterized by the oxidation of ammonia. Later (1892) he proposed replacement of *Nitromonas* by *Nitrosomonas* and named the species *Nitrosomonas europaea*.

Winogradsky (1892) proposed *Nitrosococcus* as the name of a new genus of spherical bacteria which oxidized ammonia. He did not name the species which he described. Migula (1900) proposed the species name *Micrococcus nitrosus*. The new combination *Nitrosococcus nitrosus* (Migula) Buchanan 1925 is the nomenclatural type species.

Nitrobacter was proposed by Winogradsky (1892) as the name of a genus of bacteria that convert nitrites to nitrates. One species was described but not named. Winslow *et al.* (1917) proposed the specific epithet *winogradskyi*. The type species (monotypy) becomes *Nitrobacter winogradskyi* Winslow *et al.* 1917.

Orla-Jensen (1909) proposed *Nitromonas* as the name for a genus of bacteria which oxidize nitrites to nitrates. The name is a later homonym of *Nitromonas* Winogradsky 1890 and a later synonym of *Nitrobacter* Winogradsky 1892.

The following Opinion 23 was approved unanimously by the Judicial Commission and by the International Committee on Bacteriological Nomenclature at meetings held in August, 1958 in Stockholm, in connection with meetings of the VII International Microbiological Congress.

Opinion 23

1. The generic name *Nitromonas* Winogradsky 1890 is placed in the list of *nomina generum rejicienda*.

2. The generic name Nitromonas Orla-Jensen 1909 is a later homonym of Nitromonas Winogradsky 1890 and a later synonym of Nitrobacter Winogradsky (1892). It is placed in the list of nomina generum rejicienda.

3. The generic name Nitrosomonas Winogradsky 1892 is placed in the list of nomina generum conservanda with Nitrosomonas europaea Winogradsky 1892 as the nomenclatural type species.

4. The generic name Nitrosococcus Winogradsky 1892 is placed in the list of nomina generum conservanda, with the species described by Winogradsky and later named Nitrosococcus nitrosus (Migula) Buchanan 1925 as the nomenclatural type species.

5. The generic name Nitrobacter Winogradsky 1892 is placed in the list of nomina generum conservanda, with the species described by Winogradsky and later named Nitrobacter winogradskyi Winslow et al. 1917 as the nomenclatural type species.

REFERENCES

Buchanan, R.E. 1925. General Systematic Bacteriology. Williams and Wilkins, Baltimore.

Migula, W. 1900. System der Bakterien. Bd. 2. Specielle Systematik der Bakterien.

Orla-Jensen, S. 1909. Die Hauptlinien des natürlichen Bakteriensystems. Centr. f. Bakt. Par. u. Inf. Abt. 2. 22:3-5-346.

Winogradsky, S. 1890. Recherches sur les organismes de la nitrification. 2nd Mem. Ann. de l'Inst. Past. 4:257-275.

_____. 1892. Contributions a la morphologie des organismes de la nitrification. Arch. d. Sc. Biol. St. Petersburg.

Winslow, C.E.A. et al. 1917. The families and genera of bacteria. Jour. Bact. 2:552.

OPINION 24

Rejection of the Generic Name *Arthrobacter* Fischer 1895 and Conservation of the Generic Name *Arthrobacter* Conn and Dimmick 1947

In 1947 Conn and Dimmick proposed "to revive by emendation" an old generic name, *Arthrobacter* Fischer (1895). This was a *nomen nudum*, as no species was named, and it was subsequently abandoned by its author. The genus *Arthrobacter*, as described by Conn and Dimmick, contained three species of which *Arthrobacter globiforme* (Conn) Conn and Dimmick was designated as the type.

The question has been raised whether the generic name *Arthrobacter* Fischer 1895 was validly published and whether or not it has any standing in nomenclature. The generic name *Arthrobacter* Fischer was proposed to include all rod-shaped, spore-producing nonmotile bacteria without flagella. No species was named, either at this time or later. In a 1903 publication on bacterial taxonomy Fischer did not recognize the name, and it seems that the name had been proposed for a hypothetical genus for which no species was discovered. The name was not accepted by the author and apparently it was proposed "in anticipation of the future acceptance of the taxon concerned." Such a name (Rule 12c) is not validly published, and has no standing in nomenclature.

The generic name *Arthrobacter* Conn and Dimmick was validly published and is available for use.

The following Opinion 24 was approved unanimously by the Judicial Commission and by the International Committee on Bacteriological Nomenclature at meetings held in August, 1958 in Stockholm, in connection with the meeting of the VII International Microbiological Congress.

Opinion 24

1. The name *Arthrobacter* proposed in 1895 as the name of a hypothetical genus of bacteria was not validly published and has no standing in nomenclature.

2. The generic name Arthrobacter Conn and Dimmick 1947 was validly published as a nomen novum. It is not an emendation of Arthrobacter Fischer 1895 nor a later homonym.

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MINUTES OF INTERNATIONAL ENTEROBACTERIACEAE SUBCOMMITTEE MEETINGS, VII INTERNATIONAL CONGRESS OF MICROBIOLOGY STOCKHOLM, AUGUST 1958

The Subcommittee members met at the Karolinska Institute at 10:00 A.M. on Saturday, August 2, 1958.

Those present were: F. Kauffmann, Acting Chairman, representing himself and E. Hormaeche, Chairman, W.H. Ewing, Secretary pro tem, representing himself and W.W. Ferguson, Secretary, P.R. Edwards, representing himself and P.R. Carlquist, J. Taylor, K.P. Carpenter, A. Giovanardi, K. Rauss, L. LeMinor, H. Seeliger.

Opening remarks by Acting Chairman, F. Kauffmann:

The Acting Chairman formally opened the meeting and expressed his regrets that it was not possible for Chairman Hormaeche to be present at the meetings. He also expressed thanks to W.H. Ewing for work done as Subcommittee Secretary during the past six years, and especially for the preparation of the Subcommittee reports.

The Acting Chairman pointed out that Chairman Hormaeche had arranged for two Enterobacteriaceae Subcommittee meetings during the VII Congress in Stockholm and he, the Acting Chairman, proposed that all formal business of the Subcommittee should be disposed of at the first meeting (August 2, 1958) and that the second meeting (August 7, 1958) should be an informal one, to which the Directors of National Centers, as well as all other interested individuals, should be cordially invited. This motion was seconded and unanimously approved, and the Secretary was instructed to notify the Secretary General of the Congress to this effect.

Order of Business:

1. Minutes of the last meeting (Rome, September, 1953). It was moved, seconded, and approved unanimously that these Minutes should be accepted without being read, since they were circulated to all Subcommittee members immediately after the Rome Congress, 1953.

2. Election of a Subcommittee Chairman. Joan Taylor was nominated, and elected unanimously, to succeed Prof. Hormaeche as Subcommittee Chairman at the expiration of his term September 13, 1959. No other nominations were made.

3. Election of a Subcommittee Secretary. Since Dr. W. W. Ferguson tendered his resignation as Secretary, effective at the end of the VII Congress, it was necessary to elect a new Secretary who would assume the duties immediately after the VII Congress, Stockholm, when the duties of the Secretary pro tem were concluded, August 10, 1958. K.P. Carpenter was nominated and elected unanimously as Secretary of the Enterobacteriaceae Subcommittee. No other nominations were made.

4. Report of the Enterobacteriaceae Subcommittee to the Nomenclature Committee on the occasion of the VII Congress, Stockholm. The Secretary pro tem pointed out that (a) the report was approved by a mail ballot of 14 out of 15 members (one member did not reply); that (b) the Supplement to the Shigella Report was approved by 14 of the 15 members (again, one member did not reply); and that (c) a vote was not required on the Salmonella Supplement, since this was approved at the time the Report was published. The previous approval of the Subcommittee Report was reaffirmed unanimously by those present at the August 2, 1958 Subcommittee meeting. The approved report was given to S. T. Cowan, Secretary, Nomenclature Committee, August 2, 1958. (It was pointed out by the Secretary pro tem that Minute 12 of the Nomenclature Committee, recommended publication of Subcommittee reports prior to the Congresses. In the present instance the Enterobacteriaceae Subcommittee complied with this recom endation and the Enterobacteriaceae Subcommittee Report was published in the January, 1958, issue of the International Bulletin. Hence, this report was published in accordance with the recommendations (Minute 12), but prior to its acceptance for publication by the Nomenclature Committee.

5. A historical review of the Subcommittee, prepared by the Secretary pro tem at the request of the Acting Chairman, was read. It was moved, seconded, and unanimously approved that this review should be incorporated into the Minutes of the Subcommittee meeting (Appendix 1).

6. It was recommended that, in addition to their being circulated to all Enterobacteriaceae Subcommittee members, the Minutes of the formal meeting of the Subcommittee should be published in the International Bulletin. This recommendation was put into the form of a motion, was seconded, and unanimously approved. Also, the Secretary pro tem was instructed to prepare the Minutes for publication and to request this action.

7. Recommendation of the Enterobacteriaceae Subcommittee on serotype designations within the family Enterobacteriaceae. A recommendation on this subject (Appendix 2) was presented, accepted, approved unanimously, and presented to Secretary S.T. Cowan on August 2, 1958 for transmittal to the Nomenclature Committee. It was also moved, seconded, and approved unanimously that this recommendation should be incorporated into the Minutes of the Enterobacteriaceae Subcommittee meeting in Stockholm.

8. The first report of the ad hoc Commission on the selection of neotype cultures was accepted unanimously except for one emendation. This emendation involved the deletion of the Hafnia culture, which was not regarded as typical of the group. Another strain will be selected in its stead. It was pointed out and agreed upon, during the course of the Subcommittee meeting, that the ad hoc Commission is selecting typical cultures or strains, for various categories, that the names given to them are merely labels, and that these names are not necessarily acceptable to the Subcommittee.

It was moved, seconded, and approved unanimously that the first report of the ad hoc Commission on the selection of neotype cultures, as amended, should be incorporated into the Minutes of the Subcommittee meeting (Appendix 3).

9. After a discussion regarding the designations Salmonella typhi and Salmonella typhosa (currently being considered by the Judicial Commission), the Enterobacteriaceae Subcommittee voted unanimously in favor of Salmonella typhi, as this name is the more widely used today. This resolution was given to Secretary S.T. Cowan on August 2, 1958 with a request for transmittal to the Judicial Commission and the Nomenclature Committee.

10. The following statement was approved unanimously by the Enterobacteriaceae Subcommittee and given to Secretary S.T. Cowan on August 2, 1958, for transmittal to the Judicial Commission and the Nomenclature Committee:

The Enterobacteriaceae Subcommittee does not recognize the genus Paracolobactrum nor the paracolobactrum group.

All business having been disposed of, the Enterobacteriaceae Subcommittee meeting was adjourned at 12:30 P.M. by Acting Chairman, F. Kauffmann.

W.H. Ewing
Secretary pro tem

APPENDIX 1

ENTEROBACTERIACEAE SUBCOMMITTEE OF THE INTERNATIONAL COMMITTEE ON BACTERIOLOGICAL NOMENCLATURE

Historical Review

In a letter written in May, 1958, Dr. F. Kauffmann suggested that since this year is the 25th anniversary of the establishment of the Subcommittee, it would be appropriate to present a historical review of the Subcommittee on the occasion of its meeting in Stockholm. The following review was prepared in accordance with Dr. Kauffmann's suggestion.

The Salmonella Subcommittee was established in 1933 under the chairmanship of the late H. Schuetze. The members of the first Subcommittee were E.O. Jordan, F. Kauffmann, W.M. Scott, P. Bruce-White, and R. St. John-Brooks as Secretary. Several of these original Subcommittee members have since passed away. E.O. Jordan retired from Subcommittee activities in 1934 and died in 1936. W.M. Scott was killed during the second World War. H. Schuetze died in 1946, and P. Bruce-White died in 1949.

The Salmonella Subcommittee presented its first report at the Second International Congress in London (1936). (The report was published earlier in the Journal of Hygiene, 34:

333, 1934). By the time of the Third International Congress (1939) the membership of Salmonella Subcommittee had been enlarged and included the following members (Proc. Third International Congress for Microbiology); H. Schuetze, Chairman, P.R. Edwards, E. Hormaeche, F. Kauffmann, W.M. Scott, M. Tesdal, P. Bruce-White, R. St. John-Brooks, Secretary. After the death of H. Schuetze in 1946, F. Kauffmann was named Chairman of the Salmonella Subcommittee and served in that capacity from 1947 until 1950.

On the occasion of the Fourth International Congress, Copenhagen, 1947, the Salmonella Subcommittee was dissolved and in its place a new Subcommittee, named the Enterobacteriaceae Subcommittee, was erected. (Proc. Fourth International Congress). The personnel of the new Subcommittee was to consist of the members of the former Salmonella Subcommittee together with new members to be elected by the Subcommittee itself.

Under the chairmanship of F. Kauffmann, the Enterobacteriaceae Subcommittee was enlarged and at the time of the Fifth International Congress at Rio de Janeiro (1950) its membership was as follows: F. Kauffmann, Chairman, J.S.K. Boyd, R.F. Bridges, D.W. Bruner, P.R. Carlquist, P.R. Edwards, W.H. Ewing, A. Giovanardi, E. Hormaeche, G. Olin, K. Rauss, C.A. Stuart, J. Taylor, R. St. John-Brooks, Secretary.

F. Kauffmann and P.R. Edwards were elected cochairman of the Subcommittee in 1950 and upon the retirement of R. St. John-Brooks, W.H. Ewing was elected Secretary (August, 1951). Dr. S. T. Cowan was named joint-secretary of the Nomenclature Committee about this time and became an ex officio member of the Enterobacteriaceae Subcommittee. R.F. Bridges passed away early in 1951 and later that year H.J. Bensted was named his successor as a Subcommitteeman. Except for these changes the membership and organization of the Subcommittee remained the same in the interval between the Fifth International Congress, 1950, and the Sixth International Congress, held in Rome in 1953. Following the Congress in Rome, E. Hormaeche was elected Subcommittee Chairman and his term of office began September 13, 1953. Also, L. LeMinor and H. Seeliger, having been duly elected, became members of the Subcommittee on that same date.

In 1956 J.S.K. Boyd, H.J. Bensted, and G. Olin retired as Subcommittee members and K.P. Carpenter was elected to membership June 29, 1956. Hence, the membership of the Enterobacteriaceae Subcommittee at the time of the Seventh International Congress at Stockholm, August, 1958, is as follows: E. Hormaeche, Chairman, W.W. Ferguson, Secretary, D.W. Bruner, P.R. Carlquist, K.P. Carpenter, S.T. Cowan, P.R. Edwards, W.H. Ewing, A. Giovanardi, F. Kauffmann, L. LeMinor, K.Rauss, C.A. Stuart, H. Seeliger, J. Taylor.

On the occasion of the 25th anniversary of the founding of the Subcommittee, its present members wish to again honor the memory of deceased members and to again express our thanks to retired members. We are indebted to all of these for their years of Subcommittee service and for their contributions to its endeavors.

APPENDIX 2

RECOMMENDATION OF THE INTERNATIONAL ENTEROBACTERIACEAE SUBCOMMITTEE ON SEROTYPE DESIGNATIONS WITHIN THE FAMILY ENTEROBACTERIACEAE

For transmittal to the International Committee on Bacteriological Nomenclature with a request for approval. (Transmitted to S.T. Cowan, August 2, 1958).

Members of the International Enterobacteriaceae Subcommittee do not regard the names given to the numerous Salmonella serotypes as specific epithets but only as serotype designations. These serotype designations are infrasubspecific designations that have no standing in pure nomenclature, although they are of considerable importance for purposes of taxonomy and in epidemiology.

Subcommittee members also are agreed that within each of the other groups of Enterobacteriaceae, serotype designations are infrasubspecific designations.

Several Subcommittee members have stated or implied the above-mentioned views in their publications, as have other writers. Also, a brief statement of these views is contained

in the Report of the International Enterobacteriaceae Subcommittee (Internatl. Bull. 8:27, 1958). Furthermore, precedent for the adoption of these principles has been established in connection with the Shigella group in which four subgroups are recognized and the serotypes within these are designated by Arabic numerals (Ibid., 4:19, 1954; 4:90, 1954).

Therefore, the International Enterobacteriaceae Subcommittee recommends that within the family Enterobacteriaceae, the designation given to a serotype, whether a name such as a place name, a letter, number, or a formula, should not be regarded as a specific epithet.

APPENDIX 3

ENTEROBACTERIACEAE SUBCOMMITTEE

Commission to choose neotype strains

Members of the Commission have agreed to recommend seven strains as typical representatives of their species. All these strains are in the National Collection of Type Cultures, London, England, and when approved by the Subcommittee, will be deposited in the American Type Culture Collection, Washington, D.C., U.S.A.

The strains chosen as neotype cultures are as follows:

Salmonella kauffmannii (S. typhi-murium)	NCTC 74
Salmonella cholerae-suis	NCTC 5735
Shigella dysenteriae	NCTC 4837
Arizona arizonae	NCTC 8297
Escherichia coli	NCTC 9001
Citrobacter freundii	NCTC 9750
Proteus vulgaris	NCTC 4175

After the Stockholm Congress other neotypes will be chosen by the Commission.

W.H. Ewing

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REPORT OF THE SUBCOMMITTEE ON THE FAMILY NEISSERIACEAE

This report consists of two items. The first is a final report on our study of the classification of the meningococcus, Neisseria meningitidis, and our recommendation concerning it. The second concerns the future of the Subcommittee.

At the V International Congress for Microbiology in Rio de Janeiro, 1950, the Subcommittee on the Family Neisseriaceae presented a preliminary report in which its members proposed a classification of Neisseria meningitidis into Groups A, B, C, and D, following the recommendations of the International Code of Nomenclature. This was done because there was considerable confusion in the designation used and the need for uniformity in this respect was felt by workers in that field.

At the time of the VI Congress in Rome, 1953, the Proceedings of the Rio Congress had not been published. Hence, bacteriologists had had little opportunity to become familiar with this recommended classification of the meningococcus. Individual workers here and there had found it very workable.

In April, 1954, this recommended classification was published in the International Bulletin of Bacteriological Nomenclature and Taxonomy. Since that time this classification has attained wide use, and has found its way into several well-known text and reference books. For example, it has been adopted in the seventh edition of Bergey's Manual of Determinative Bacteriology, and is described in the latest (4th) edition of the Topley and Wilson comprehensive text edited by Wilson and Miles, and in the 11th edition of Zinsser's Textbook of Bacteriology by Smith and Conant. The use of this recommended A B C D classification is growing and seems to be meeting with satisfaction among those who use it. We therefore recommend this classification of N. meningitidis to the International Committee on Bacteriological Nomenclature. The accompanying Table shows the relation of this classification to those that have been used in the past. In presenting this classification we realize that no such study is either perfect or finished, but it gives us a good working

RELATIONSHIPS AMONG THE VARIOUS CLASSIFICATIONS OF MENINGOCOCCI

Dopter and Pauron, 1914	Gordon and Murray, 1915	Griffith; Scott, 1916	Nicolle, Debains, and Jouan, 1918	Evans (Tropin Groups), 1920	Common use 1940	Recommended by Committee 1950
Meningococcus	I III	I	A	R	I	A
Para-meningococcus	II	II	B	S	II	B
	IV			Z	IV	D
			C		II alpha	C
			D*			

*Relation of this D to other groups is unknown.

basis for use today. This is the final report on the classification of the meningococcus by this group.

The second item which we would like to lay before your Committee is the question of our continuance. Several of the original members have died, and some others have retired from active work, or have gone into other fields. Less than half of the original group is now actually interested in this sphere of activity.

There is, however, considerable work being done outside of our Subcommittee on various species of the Family Neisseriaceae. Although not primarily taxonomic, the information being gained makes a fundamental background for the study of relationships. Such work is going on in the United States, in Holland, in Scandinavian countries, and in Jugoslavia to our knowledge, and maybe elsewhere. Work is being done on the Veillonellae, on the epidemiological distribution of groups of meningococcus, on the chemistry of the polysaccharides of the serological groups of meningococcus, on metabolic functions and genetic changes in all of the Neisseriae, including the gonococcus. A new field has opened up in finding new species of Neisseria in animals. Some of these younger people would make useful members of our group, and would give its work a new impetus. The names of desirable possible recruits can be given to the Permanent Secretary should the International Committee on Bacteriological Nomenclature decide to continue our Subcommittee on the Neisseriaceae.

Michael J. Pelczar, Secretary

Sara E. Branham, Past Secretary

E.G.D. Murray, Chairman

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ALLOCATION OF SUBVENTIONS TO CULTURE COLLECTIONS OF MICROORGANISMS

Proposals Relating to Allocation of Funds by the International Union of Biological Sciences

At its meeting in July, 1958, the International Union of Biological Sciences suggested that the International Association of Microbiological Societies should consider the principles by which funds are distributed to culture collections.

The Judicial Commission recommends the following proposals to the Nomenclature Committee, which, if approved, are to be presented to the Executive Committee and the Plenary Session of the Congress.

The terms "type culture collection" and "collection of type cultures" in the titles of culture collections do not have the significance they bear in nomenclature, and the use of these terms should be discouraged; the simpler designation "culture collection" is preferable.

Funds available to the International Association of Microbiological Societies (IAMS) for distribution to culture collections shall be used only to support work in the classification of microorganisms and in the maintenance of their cultures. This work will include research and the routine procedures of the collection. IAMS funds earmarked for culture collections should not be made available for the support of offices, central or otherwise, for the printing of catalogs, or for providing secretarial assistance.

Laboratories or individuals who maintain culture collections should present their requests for financial help in a form that will show the Executive Committee where the help is needed and should outline the projected work. On completion, or at the end of each year, the recipient of a subvention should present a report to the Executive Committee.

The above proposals were approved by the International Committee of Bacteriological Nomenclature, by the Executive Committee, and by the Plenary Session of the International Association of Microbiological Societies, at the VII International Congress for Microbiology at Stockholm, 1958.

S.T. Cowan
W.A. Clark

Joint Permanent Secretaries

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REPORT OF THE INTERNATIONAL COMMITTEE ON BACTERIOLOGICAL NOMENCLATURE TO THE PLENARY SESSION OF THE VII INTERNATIONAL CONGRESS FOR MICROBIOLOGY, AUGUST, 1958

The Committee, under the chairman, Dr. E.G.D. Murray, met during the Congress. New members, nominated by their respective countries, were accepted. These were:

France: P. Schaeffer, Institute Pasteur, Paris.
J. Jacquet, Faculté des Sciences, Caen.
J. Senez, Station de Microbiologie du C.N.R.S., 66 Rue St. Sebastien, Marseille.

Norway: J. Oeding, Gades Institute, University of Bergen.
Rolf F. Saxholm, Bacteriological Dept., State Institute of Public Health, Oslo.

Poland: F. Przesmycki, State Institute of Hygiene, Chocimska 24, Warsaw.
S. Slopek, Institute of Immunology, 4 Chalubinskiego Str., Wroclaw.

U.S.A. L.M. Black, Department of Botany, University of Illinois, Urbana, Illinois.
C.B. Philip, National Microbiological Institute, Rocky Mountain Laboratory, Hamilton, Montana.

U.S.S.R. N.A. Krassilnikov, Institute of Microbiology, Academy of Sciences, Moscow.
V.L. Ryzhkov, Institute of Virusology, Academy of Medical Sciences, Moscow.
V.L. Troitsky, Institute of Epidemiology and Microbiology, Academy of Medical Sciences, Moscow.
G.V. Vygodtchikov, Institute of Epidemiology and Microbiology, Academy of Medical Sciences, Moscow.
V.M. Zhdanov, Institute of Virusology, Academy of Medical Sciences, Moscow.

Since the last Congress Dr. T. Wikén resigned as Joint Secretary representing non-medical bacteriology, and Dr. W.A. Clark has acted as temporary secretary. Dr. Clark's appointment as Permanent Joint Secretary was recommended by the Nomenclature Committee.

The Nomenclature Committee and its Judicial Commission gratefully acknowledged grants-in-aid received from the International Union of Biological Sciences and UNESCO. These grants had enabled the Commission to publish its own Bulletin to inform members, and microbiologists at large, of the work of the Committee and Commission.

The Committee has accepted an invitation from the International Union of Biological Sciences to nominate two members to a small subcommittee to co-ordinate terminology in the bacteriological, botanical, and zoological codes of nomenclature; the two members to be Dr. R.E. Buchanan and Dr. J. Ramsbottom.

The Editorial Board published in June 1958 an annotated edition of the Bacteriological Code (Iowa State College Press, price $3.50) which will form the basis for the comparison with the other codes; this English language version is designated the official text.

The Judicial Commission, under the chairmanship of Dr. R.E. Buchanan, issued Opinions relating to various problems of nomenclature. These Opinions, approved by the Committee, will be published in full in the International Bulletin of Bacteriological Nomenclature and Taxonomy.

New Commissioners were elected as follows:

To the 8th Class (term of office expiring at end of Eighth Congress) A. Sordelli, Posodas 1553, Martinez F.C.N.G.B.M., Buenos Aires, Argentina.

To the 9th Class: S. Soriano, Instituto de Microbiologia Agricola, Villa Ortura-Suc.17, Buenos Aires, Argentina.

To the 10th Class: F. Kauffmann, Statens Seruminstitut, Amager Blvd. 80, Copenhagen, S., Denmark.
P. Schaeffer, Pasteur Institute, Paris, France.
H. Seeliger, Hygiene-Institut de Universitat Bonn, Venusberg, Bonn, Germany.
V.M. Zhdanov, Institute of Virusology, Academy of Medical Sciences, Moscow, U.S.S.R.

S.T. Cowan W.A. Clark
Joint Permanent Secretaries

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MEMBERSHIP ON EXECUTIVE COMMITTEE (IAMS), AUTHORIZATION OF AN ADVISORY SUBCOMMITTEE ON SUBVENTIONS TO CULTURE COLLECTIONS, AND REQUEST FOR A GRANT-IN-AID FOR A SYMPOSIUM ON MICROBIAL TAXONOMY

Proposals made by the International Committee on Bacteriological Nomenclature and its Judicial Commission to the Executive Committee of the International Association of Microbiological Societies

To the Secretary, Executive Committee,
International Association of Microbiological Societies:

1. At its meetings in Stockholm during the VII International Congress for Microbiology, the Nomenclature Committee thought that the Executive Committee of the International Association of Microbiological Societies might find it helpful to have as one of its members a representative of the Nomenclature Committee which has been active continuously since the first congress in 1930.

Therefore we forward the following proposal from our Committee for consideration by the Executive Committee.

> The Nomenclature Committee proposes that the Executive Committee of the International Association of Microbiological Societies be authorized by the Congress to add to its statutory membership a member of the Nomenclature Committee to be nominated by the Nomenclature Committee.

2. The Judicial Commission, at its meeting of 31st July, 1958, recommended that it should be authorized to appoint a subcommittee to advise the Executive Committee of the International Association of Microbiological Societies on the allocation of funds to culture collections.

The Commission will proceed with the appointment of this Subcommittee as soon as they are authorized to do so by the Executive Committee.

3. The Judicial Commission of the Nomenclature Committee

requests the Executive Committee of the International Association of Microbiological Societies to seek a grant-in-aid from the International Union of Biological Sciences for the holding of a symposium on microbial taxonomy at the next International Congress.

W.A. Clark
S.T. Cowan

Joint Permanent Secretaries

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AUTHORIZATION OF A COMMITTEE ON TERMINOLOGY IN BIOLOGICAL NOMENCLATURE BY THE INTERNATIONAL UNION OF BIOLOGICAL SCIENCES

A Statement Presented to the International Union of Biological Sciences, July, 1958

To the Secretary of the International Union of Biological Sciences, Professor Montalenti:*

Our President, Professor Hörstadius, requested that at this Session of the International Union of Biological Sciences there be submitted a definite proposal relative to the authorization of a Committee of this Union to include representatives of the three International Commissions (or Committees) dealing with problems of nomenclature in the three divisions of Biology, namely Botany, Zoology, and Microbiology (Bacteriology).

The suggestion was made that the three codes covering problems in biological nomenclature, although all based initially upon certain Linnaean precepts, have been developed in the three disciplines quite independently. These International Commissions or Committees constituted by International Congresses representing respectively the three branches of biology have developed three nomenclatural codes. These codes determine the character of the scientific names given or to be given to all living things. We may well regret that the comprehensive discipline of biology did not supervise from the beginning the development of a single code governing nomenclature. This was not done, and the three nomenclatural codes, while reasonably alike in many respects, reflect some fundamental conflicts in underlying philosophies which have resulted in numerous differences. These varying concepts and philosophies are so deeply rooted that it is believed, for the present at least, to be quite unprofitable to attempt to reconcile them and to develop a single biological code of nomenclature. A committee if constituted by this Union should not have as its immediate objective such reconciliation or unification.

*The proposal relative to the authorization of a Committee on Terminology in Biological Nomenclature was approved by the International Union of Biological Sciences.

However, a joint committee could prove most helpful to working biologists in quite a different field (area). Unfortunately it is true that there are many identical words and phrases in the several codes that are used with different meanings, even more frequently identical concepts are given different names. In most cases these differences in terminology are biologically indefensible, disturbing and troublesome. If agreement as to terminology is found in some cases to be impossible, it would be quite appropriate to make clear the fact that names of some concepts in botany are synonyms of quite different names used in zoology. Biological taxonomists owe it to those who use the codes who are not "professional" taxonomists to minimize terminological difficulties. For example, the Journal of General Microbiology published in Britain accepts articles dealing with bacteria, certain fungi and yeasts, protozoa, and viruses. The editor can hope that the protozoologist will use names for his organisms that conform to the rules of the zoological code, that the mycologist knows his botanical code, and the bacteriologist is a passable taxonomist and familiar with the bacteriological code. But he must be constantly on the alert to see that each author uses correctly words having taxonomic significance such as availability, valid, correct, epithet, specific name, binary combination and others with the meanings recognized in the pertinent code.

Mr. President: I propose the following:

1. That this Union authorize the formation of an ad hoc Committee on Terminology in Biological Nomenclature.

2. That the Committee be constituted by asking each of the three international commissions to appoint (or nominate) two members.

3. That the Committee be asked to consider and report on possibilities of reconciliation of differing terminologies in the several International Codes of Biological Nomenclature.

R. E. Buchanan

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THE NATIONAL TYPE CULTURE COLLECTION OF MARINE BACTERIA IN GREAT BRITAIN*

J.M. Shewan, G.D. Floodgate, and P.R. Hayes

Torry Research Station, Aberdeen
Food Investigation Organisation
Department of Scientific and Industrial Research

It is well recognised that marine bacteriologists usually have great difficulty in classifying the organisms that they isolate. This difficulty is due partly to the present confusion in the taxonomy of the groups most frequently encountered, that is the Achromobacter, Flavobacterium, Pseudomonas, and Vibrio genera, and partly to the absence of the type-strains, and other described species from any known Culture Collection. The taxonomic difficulty can only be resolved by a thorough and detailed study of the bacteria involved. The other difficulty would have been averted had type culture collections existed into which named cultures could have been deposited.

The only collections of marine bacteria known to the authors are at the Scripps Institute, La Jolla, California, under Professor C.E. ZoBell and at the Hopkins Marine Station, Pacific Grove, California, under Professor C.B. van Niel. A few specialised private collections are also known to exist and a few marine strains are held at the Pasteur Institute, Paris, at the Microbiological Institute, Delft, and no doubt elsewhere. In Britain a small collection has been maintained for years at the Torry Research Station, consisting mainly of bacteria isolated from marine fish and solar salts. As a result of consultations between various interested Government Departments, the Development Commission and the University of Aberdeen, it was recently agreed that the scope of this collection be broadened to include bacteria from all marine sources and that it be set up on a more permanent basis.

Work now in progress consists of comparing various methods for the long term preservation of marine bacteria as experience elsewhere suggested that some marine species cannot be lyophilised. In addition detailed studies of certain

selected groups of these bacteria have been begun with a view to a better taxonomy. The present collection, maintained on culture media and consisting of about 200 named strains and several hundred recently isolated unnamed strains mainly from fish, will form one of the British national collections of type cultures. The development of the Collection and the preparation of a catalogue, will, of course, take some time; but meantime, marine bacteriologists, and in particular authors describing new species, are asked to deposit their cultures in the collection so that their isolates may be made available for future reference by other workers.

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REQUEST FOR EMENDATION OF SECTION 6 OF OPINION 11

Preliminary Statement

W.H. Ewing

International Shigella Center (Atlanta),
Communicable Disease Center,
Atlanta, Georgia

1. Review of Action by the Judicial Commission.

The first sentence of Draft Proposal 1 (International Bulletin 3:83, 1953) was approved and reads as follows: "Shigella dysenteriae (Shiga), Castellani and Chalmers was validly published and is legitimate as the name of the dysentery bacterium described by Shiga (1898)" (ibid., 3:150, 1953; 4:148, 1954.

Draft proposals 2, 3, and 4 (ibid., 3:83-84, 1954) were approved (ibid., 3:150, 1953; 4:149, 1954), by which action the specific epithets flexneri, boydii, and sonnei were conserved.

The first sentence of Draft Proposal 5 (ibid., 3:84, 1953) was amended to read: "A type or standard culture is to be designated by the Enterobacteriaceae Subcommittee of the International Nomenclature Committee for each of the four species" (ibid., 3:151, 1953; 4:149, 1954).

A new Draft Proposal 6 was proposed by Dr. Murray and seconded by Dr. Cowan and was approved unanimously (ibid., 3:151, 1953). Proposal 6 reads as follows: "A culture belonging to the species Shigella flexneri, Shigella boydii, (or) Shigella sonnei could be completely identified by appending to the name "serotype ...." (ibid., 3:151, 1953; 4:149, 1954).

2. Comment.

By their approval of the first sentence of Draft Proposal 1 and by their approval of Draft Proposals 2, 3, 4, and 5, the Judicial Commission recognized the existence of four species in the genus Shigella: Shigella dysenteriae, Shigella flexneri, Shigella boydii, and Shigella sonnei. However, the Judicial Commission failed to act upon the remainder of Draft Proposal 1 and did not publish an Opinion on the advisability

of adding microorganisms as serotypes within Shigella dysenteriae, although the Commission allowed for this practice within the other three species by their approval of Draft Proposal 6 (Opinion 11, section 6).

Originally, the Shigella Commission of the Enterobacteriaceae Subcommittee recommended that serotypes within all four species of Shigella should be completely identified by adding the appropriate serotype number to the specific name. Arabic numerals, not names, were selected to designate the various serotypes within each of the four species or subgroups. This system of taxonomy and nomenclature was accepted by the Enterobacteriaceae Subcommittee and has been employed in the last three Subcommittee reports, i.e., those presented to the International Congresses in Rio de Janeiro (1950), Rome (1953), and Stockholm (1958). Since the system was first introduced in 1949, it has gained wide acceptance and now is used in most parts of the world.

3. Recommendation.

Since the system of taxonomy and nomenclature for the genus Shigella employed by the Enterobacteriaceae Subcommittee recognizes only one species (Shigella dysenteriae) within Shigella subgroup A and allows for the designation of serotypes within this species by the use of Arabic numerals, it is recommended that Section 6 of Opinion 11 (Draft Proposal 6) be officially amended in accordance with current practice, in order to render the system of serotype designation uniform throughout the entire genus.

Therefore, it is recommended that the following emendation of Section 6, Opinion 11, be approved by the Judicial Commission:

Draft Proposal 7 (File 54).

A culture belonging to the species Shigella dysenteriae, Shigella flexneri, Shigella boydii, or Shigella sonnei may be completely identified by appending the appropriate serotype number (arabic) to the name.

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Entered as second class matter, post office, Ames, Iowa